IN THE CLAIMS

Please replace any previous listing of the claims with the following replacement listing of the claims:

Replacement Listing of the Claims

1 and 2. (Canceled)

3. (Previously presented) The method of claim 26, wherein at least one of said classified attribute types is a start time, and wherein at least one of said storage volumes is accessed according to said start time type for storage and retrieval of values of said attributes corresponding to at least one of said events and/or activities.

4. (Previously presented) The method of claim 26, wherein at least one attribute of a plurality of said events and/or activities is common to at least one of said defined attribute types, and wherein at least one storage volume of said database is allocated to all of said common attributes.

5. (Previously presented) The method of claim 26, further comprising compressing said data of said industrial process which is stored in a first one of said storage volumes according to identity of values of said data of said industrial process of said attributes of consecutive events and/or activities that have been allocated for storage in said first one of said storage volumes.

6. (Previously presented) The method of claim 5, wherein said data structure further comprises a time stamp, and wherein said first one of said storage volumes is accessed according to said time stamp for storage and/or retrieval of said values of said data of said industrial process, and wherein said values of

said data of said industrial process of a first event are retrieved from said first storage volume by using a value of a first time stamp for said first event or of a second time stamp value of a second one of said events that is earlier in time than said first time stamp value.

7. (Previously presented) The method of claim 26, wherein a value of an attribute type that is always the same for a specific one of said event or activity types is classified as static, and further comprising optimizing data storage in one of said storage volumes by omitting storage of said static value.

8. (Previously presented) The method of claim 26, wherein said industrial process is one of a plurality of industrial processes, and wherein said program operates said computer for each of said plurality of industrial processes using said data structure.

9. (Previously presented) The method of claim 8, wherein at least two of said plurality of industrial processes are different from one another.

10. (Previously presented) The method of claim 26, further comprising presenting data values of different ones of said events and/or activities that are defined as different event and/or activity types in any one of a plurality of formats to said client device.

11. (Original) The method of claim 10, wherein said plurality of formats are selected from the group consisting of: row format, column format and chart format.

12. (Previously presented) The method of claim 26, further comprising developing a map structure for mapping diverse external names of said attributes and/or field contents thereof to a common internal attribute name and/or field content.

13 and 14. (Canceled)

15. (Previously presented) The computer system of claim 27, wherein at least one of said classified attribute types is a start time, and wherein at least one of said volumes is accessed according to said start time type for storage and retrieval of values of said attributes corresponding to at least one of said events and/or activities.

16. (Previously presented) The computer system of claim 27, wherein at least one attribute of a plurality of said events and/or activities is common to at least one of said defined attribute types, and wherein at least one storage volume of said database is allocated to all of said common attributes.

17. (Previously presented) The computer system of claim 27, further comprising compressing said data of said industrial process which is stored in a first one of said storage volumes according to identity of values of said attributes of consecutive events and/or activities that have been allocated for storage in said first one of said storage volumes.

18. (Previously presented) The computer system of claim 17, wherein said data structure further comprises a time stamp, and wherein said first one of said storage volumes is accessed according to said time stamp for storage and/or retrieval of said values, and wherein said values of a first event are retrieved from said first storage volume by using the value of a first time stamp for said first event or of a second time stamp value of a second one of said events that is earlier in time than said first time stamp value.

19. (Previously presented) The computer system of claim 27, wherein a value of an attribute type that is always the same for a specific one of said event or activity types is classified as static, and further comprising optimizing data

storage in said first one of said storage volumes by omitting storage of said static value.

20. (Previously presented) The computer system of claim 27, wherein said industrial process is one of a plurality of industrial processes, and wherein each of said plurality of industrial processes is classified for defined event and/or activity types and defined attribute types using said data structure.

21. (Previously presented) The computer system of claim 20, wherein at least two of said plurality of industrial processes are different from one another.

22. (Previously presented) The computer system of claim 27, wherein said program further presents data values of different ones of said event and/or activities that are defined as different event and/or activity types in any one of a plurality of formats to said client device.

23. (Original) The computer system of claim 22, wherein said plurality of formats is selected from the group consisting of: row format, column format and chart format.

24. (Previously presented) The computer system of claim 27, wherein said program further develops a map structure for mapping diverse external names of attributes and/or field contents thereof to a common internal attribute name and/or field content.

25. (Canceled)

26. (Currently amended) A method for using a computer to define, store and retrieve data of an industrial process, said method comprising:

collecting with a monitor said data of said industrial process and providing said data of said industrial process to said computer;

operating said computer with a program

to define said industrial process by

identifying, in response to input data entered by a user, one or more events and/or activities of said industrial process and one or more attributes of said events and/or said activities;

classifying said identified events, activities and attributes according to a data structure that comprises at least a first event type or at least a first activity type and a plurality of attribute types therefore; and

organizing a plurality of storage volumes of a database for said classified attribute types, wherein said plurality of storage volumes comprises first and second storage volumes that are organized by said attribute types for said first activity type or for said first event type and for storage of values of ~~first and second ones of~~ said attributes of said first and second attribute types, respectively, of said first activity type or of said first event type, wherein values of first and second attributes of said first and second attribute types are stored only in said first and second volumes, respectively; and

to store and retrieve said collected data of said industrial process when running by

using said data structure in a manner that permits access to said organized storage volumes of said database by said activities, events and attributes that are identified by said identifying step ~~(a)~~ to store said collected data of said industrial process in said storage volumes according to said data structure and, in response to a request, which identifies a first activity of said first activity type or a first event of said first event type and said first attribute type, to retrieve from said first storage volume at least one ~~or more~~ values of said first attribute type that corresponds to said first activity or said first event and, in response to a request, which identifies said first activity of said first activity type or said first event of said first event type and said second attribute type, to retrieve from said second

storage volume at least ~~one or more~~ values of said second attribute that corresponds to said first activity or said first event; and

providing said retrieved values of said first and second attribute~~s~~ types to a client device.

27. (Currently amended) A computer system that defines, stores and retrieves the data of an industrial process comprising:

a computer, a database, a client device and a monitor that collects said data of said industrial process and provides said data of said industrial process to said computer, wherein said computer comprises a program that when executed on said computer performs the steps comprising:

defining said industrial process by

identifying, in response to input data entered by a user, one or more events and/or activities of said industrial process and one or more attributes of said events and/or activities;

classifying said events, activities and attributes that are identified by step (a) according to a data structure that comprises at least a first event type or at least a first activity type and a plurality of attribute types therefore; and

organizing a plurality of storage volumes of a database for said classified attribute types, wherein said plurality of storage volumes comprises first and second storage volumes that are organized by said attribute types for said first activity typeor for said first event type and for storage of values of ~~first and second ones of~~ said attributes of said first and second attribute types, respectively, of said first activity type or of said first event type, wherein values of first and second attributes of said first and second attribute types are stored only in said first and second volumes, respectively; and

storing and retrieving said collected data of said industrial process when running by

using said data structure in a manner that permits access to said organized storage volumes of said database by said activities, events and attributes that are identified by said identifying step ~~(a)~~ to store said data of said industrial process in said storage volumes according to said data structure and, in response to a request, which identifies a first activity of said first activity type or a first event of said first event type and said first attribute type, to retrieve from said first storage volume at least one ~~or more~~ values of said first attribute type that corresponds to said first activity and, in response to a request, which identifies said first activity type or said first event type and said second attribute type, to retrieve from said second storage volume at least one ~~or more~~ values of said second attribute type that corresponds to said first activity; and

providing said retrieved values of said first and second attributes to a client device.

28. (Currently amended) A memory media having stored thereon a computer readable program for controlling a computer that defines, stores and retrieves data of an industrial process, wherein said computer readable program comprises:

defining said industrial process by executing

one or more first program instructions that control said computer to identify, in response to input data entered by a user one or more events and/or activities of said industrial process and one or more attributes of said events and/or activities ;

one or more second program instructions that control said computer to classify said identified events, activities and attributes that are identified by said computer per the first program instructions according to a data structure that comprises at least a first event type or at least a first activity type and a plurality of attribute types therefore; and

one or more third program instructions that control said computer to organize a plurality of storage volumes of a database for said classified

attribute types wherein said plurality of storage volumes comprises first and second storage volumes that are organized by said attribute types for said first activity type or for said first event type and for storage of values of ~~first and second ones of~~ said attributes of said first and second attribute types, respectively, of said first activity type or of said first event type, wherein values of first and second attributes of said first and second attribute types are stored only in said first and second volumes, respectively; and

storing and retrieving said data of said industrial process when running by executing

one or more fourth program instructions that control said computer to use said data structure in a manner that permits access to said organized storage volumes of said database by said activities, events and attributes that are identified by said computer per the first program instructions to store said collected data of said industrial process in said storage volumes according to said data structure and, in response to a request, which identifies a first activity said first activity type or a first event of said first event type and said first attribute type, to retrieve from said first storage volume at least one ~~or more~~ values of said first attribute type that corresponds to said first activity and, in response to a request, which identifies said first activity of said first activity type or said first event of said first event type and said second attribute type to retrieve from said second storage volume at least one ~~or more~~ values of said second attribute that corresponds to said activity or said first event; and

one or more fifth program instructions that control said computer to provide said retrieved values of said first and second attributes to a client device.

29. (Previously presented) The memory media of claim 28, wherein a portion of said data of said industrial process is continuous data of a time variable

parameter , and wherein said monitor comprises at least one sensor that receives said continuous data and provides it to said computer.

30. (Previously presented) The method of claim 26, wherein a portion of said data of said industrial process is continuous data of a time variable parameter , and wherein said monitor comprises at least one sensor that receives said continuous data and provides it to said computer.

31. (Previously presented) The computer system of claim 27, wherein a portion of said data of said industrial process is continuous data of a time variable parameter , and wherein said monitor comprises at least one sensor that receives said continuous data and provides it to said computer.